

IV. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1 and 3-8 are pending in the application. Claims 1 and 8 are independent.

Claims 1-8 were rejected under 35 USC 112, second paragraph, for the reasons noted at page 2 of the Office Action. Applicants respectfully traverse this rejection on the ground that the person of ordinary skill in the art would not be confused as to the meaning or scope of the claims. Nevertheless, Claim 1 has been amended for clarity with the specification and Drawings, and not in response to any statutory requirement.

As for the rejection of Claim 4, Applicants respectfully submit that the periodic band-pass filter can be comprised of a Mach-Zehnder Interferometer. Please be advised that there are a number of different ways to implement a periodic band-pass filter. The characteristics of a periodic band-pass filter are that there is a repeating pass-band/stop-band pattern. One implementation is a Mach-Zehnder Interferometer. As such, Applicants respectfully submits that Claim 4 as it stands is not confusing, vague or indefinite. The Examiner is respectfully requested to withdraw the rejection of the claim under 35 U.S.C. 112.

Claims 1-8 were rejected as being unpatentable over Fatehi, for the reasons detailed at pages 2-3 of the Office

Action. Applicants respectfully traverse all art rejections. Nevertheless, Claims 1 and 7 have been amended for clarity with the specification and Drawings, and not in response to any statutory requirement.

Each of the independent Claims 1 and 8 recites a novel combination of structure and/or function whereby a multi-wavelength laser includes, inter alia, a periodic band-pass filter. On the other hand, Fatehi introduces an all optical inverter. This design inverts the bit pattern of an input signal and at the same time converts the wavelength of the carrier to the output. This is not designed to be a laser source per se. Most importantly, there is no periodic band-pass filter in the ring. Element 250 is simply an optical band-pass filter 250. Without the periodic nature of this band-pass filter, obviously there will be no generation of multiple wavelengths.

The point of the periodic band-pass filter is to force the gain module to concentrate its energy in specific periodic frequency wavelength bands and consequently to lase in those bands. In the ideal case, it is expected that one lasing source will be observed in each band-pass of the periodic band-pass filter. See Figures 3 and 4 and associated description.

On the basis of this argument, Applicants respectfully submit that the claims are neither disclosed nor suggested by Fatehi.

Another feature of the claims not addressed in the

Office Action is the polarization aspect claimed in Claim 5.

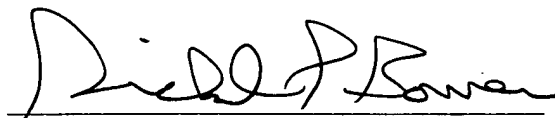
Usually ring lasers are sensitive lasers. Polarization changes in the ring can potentially stop the operation from being multi-wavelength. As such, the polarization controller can optimize the effect of polarization of the ring to ensure uniform gain in all the channels of interest. Since Fatehi does not disclose or suggest this feature, this clearly cannot be anticipation.

The location of the gain-flattening filter is also of significance. It can be seen that it is located between the gain element and the periodic filter. This ensures a practical and simple location for the filter. It can be included as part of the optical amplifier in the ring and as such the designer of the optical amplifier can design the amplifier to have uniform gain in the whole band of interest.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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